The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. **(currently amended)** A dispersion compensating fiber, comprising:

   a refractive index profile having

   a central core segment with

   an inner peak having a relative refractive index $\Delta_i\%$ located at a radius r_i of between 0.0 μm and 1.0 μm,

   an outer peak with a relative refractive index $\Delta_1\%$ located at a radius r_o between 1.5 μm and 2.5 μm, and

   a trough positioned between the inner peak and outer peak having a minimum relative refractive index $\Delta_t\%$ less than both $\Delta_i\%$ and $\Delta_1\%$ <u>wherein the minimum relative refractive index $\Delta_t\%$ is between 0.3% to 1.0%</u>,

   a moat segment, surrounding the central core segment, having a relative refractive index $\Delta_2\%$, and

   a ring segment, surrounding the moat segment, having a positive relative refractive index $\Delta_3\%$ wherein $\Delta_t\%$ and $\Delta_3\%$ are greater than $\Delta_2\%$ <u>wherein the dispersion compensating fiber exhibits negative dispersion at 1550 nm</u>.

2. **(original)** The dispersion compensating fiber of claim 1 having a total dispersion at 1550 nm of between -50 and -100 ps/nm/km.

3. **(original)** The dispersion compensating fiber of claim 4 having a total dispersion slope at 1550 nm of −1.0 to −2.5 ps/nm²/km.

4. **(original)** The dispersion compensating fiber of claim 1 having a kappa, defined as a ratio of total dispersion at 1550 nm divided by total dispersion slope at 1550 nm, of less than 100 nm.

5. **(original)** The dispersion compensating fiber of claim 1 having an effective area at 1550 nm of greater than 20 μm^2.

6. **(original)** The dispersion compensating fiber of claim 5 having an effective area at 1550 nm of greater than 25 μm^2.

7. **(original)** The dispersion compensating fiber of claim 1 wherein the inner peak index $\Delta_i\%$ is between 0.5% to 2.0%.

8. **(original)** The dispersion compensating fiber of claim 1 wherein the inner peak is located at a radius r_i of between 0.0 μm and 0.85 μm.

9. **(original)** The dispersion compensating fiber of claim 1 wherein the outer peak index $\Delta_1\%$ is between 0.9% to 2.0%.

10. **(original)** The dispersion compensating fiber of claim 1 wherein the outer peak is located at a radius r_o between 1.4 μm and 2.4 μm.

11. **(canceled)**

12. **(original)** An optical fiber span, comprising:

a transmission fiber operating in a wavelength band having a center operating wavelength, and

the dispersion compensating fiber of claim 1 optically coupled to the transmission fiber, wherein a dispersion minima of the dispersion compensating fiber is positioned at least 55 nm above the center operating wavelength.

13. **(original)** An optical fiber span, comprising:

a transmission fiber operating in a wavelength band having a center operating wavelength, and

the dispersion compensating fiber of claim 1 optically coupled to the transmission fiber, wherein a residual dispersion of the span is less than +/- 25 ps/nm per 100 km of the transmission fiber over a wavelength band of between about 1527 to 1567 nm.

14. **(original)** A dispersion compensating module comprising the dispersion compensating fiber of claim 1.

15. **(original)** The dispersion compensating fiber of claim 1 having a kappa, defined as a ratio of total dispersion to total dispersion slope at 1550 nm, of between 35 nm to 65 nm.

16. **(original)** The dispersion compensating fiber of claim 1 wherein $\Delta_2\%$ is less than -0.5%.

17. **(original)** The dispersion compensating fiber of claim 1 wherein the relative refractive index $\Delta_3\%$ of the ring segment is greater than 0.4%.

18. **(original)** The dispersion compensating fiber of claim 17 wherein $\Delta_3\%$ is between 0.5% to 1.0%.

19. **(original)** A dispersion compensating fiber, comprising:

a refractive index profile having

a central core segment with

an inner peak with a relative refractive index $\Delta_i\%$ in the range from 0.7% to 2.0% located at a radius r_i of between 0.0 μm and 1.0 μm,

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an outer peak with a relative refractive index $\Delta_1\%$ in the range from 0.7% to 2.0% located at a radius r_o between 1.5 μm and 2.5 μm, and

a trough positioned between the inner peak and the outer peak having a minimum trough index $\Delta_t\%$ in the range from 0.3% to 1.0% wherein $\Delta_t\%$ is less than both $\Delta_i\%$ and $\Delta_1\%$,

a moat segment, surrounding the central core segment, having a negative relative refractive index $\Delta_2\%$ more negative than -0.5%, and

a ring segment, surrounding the moat segment, having a relative refractive index $\Delta_3\%$ greater than 0.4%.

20. **(original)** A dispersion compensating fiber, comprising:

a refractive index profile having

a central core segment with

an inner peak with a relative refractive index $\Delta_i\%$ in the range from 0.5% to 2.0% located at a radius r_i of between 0.0 μm and 0.85 μm,

an outer peak with a relative refractive index $\Delta_1\%$ in the range from 0.9% to 2.0% located at a radius r_o between 1.5 μm and 2.5 μm, and

a trough positioned between the inner peak and the outer peak having a minimum trough index $\Delta_t\%$ in the range from 0.3% to 1.0% wherein $\Delta_t\%$ is less than both $\Delta_i\%$ and $\Delta_1\%$,

a moat segment, surrounding the central core segment, having a negative relative refractive index $\Delta_2\%$ between about -0.5 to -1.0%, and

a ring segment, surrounding the moat segment, having a relative refractive index $\Delta_3\%$ of between about 0.5 to 1.0%.